

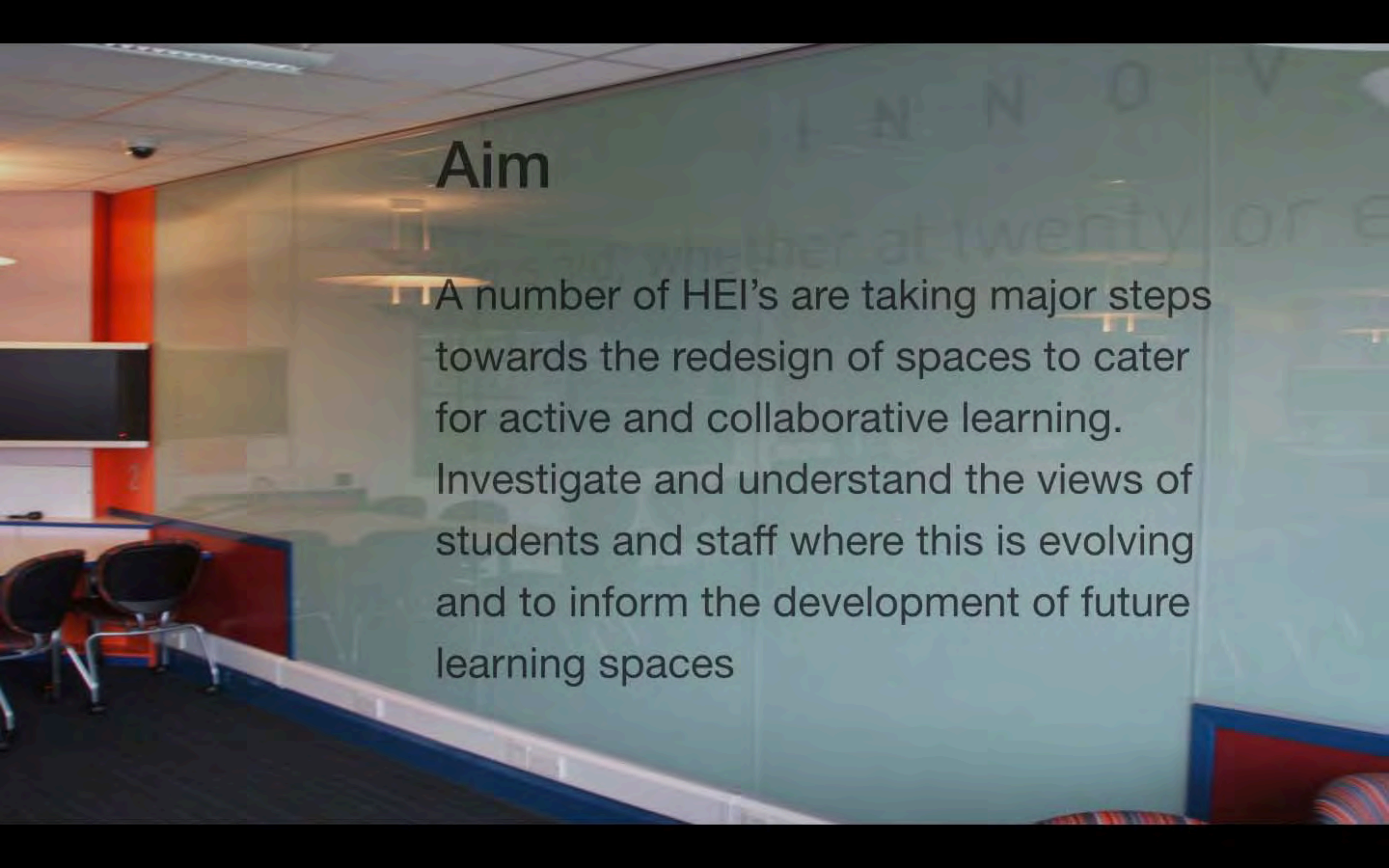


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Introduction

To consider the implications of changes in teaching and learning pedagogy that impact on the design of new collaborative learning environments in higher education

A modern office interior featuring glass partitions, orange wall accents, and contemporary furniture. The scene is brightly lit with overhead lights. The text is overlaid on the right side of the image.

Aim

A number of HEI's are taking major steps towards the redesign of spaces to cater for active and collaborative learning.

Investigate and understand the views of students and staff where this is evolving and to inform the development of future learning spaces

Research

Triangulated methodology of observation, photography and interviews.

Focus on the consequences of new layouts, technology and furniture arrangements designed to enable collaborative and active learning

Field research April 2013



University of Derby



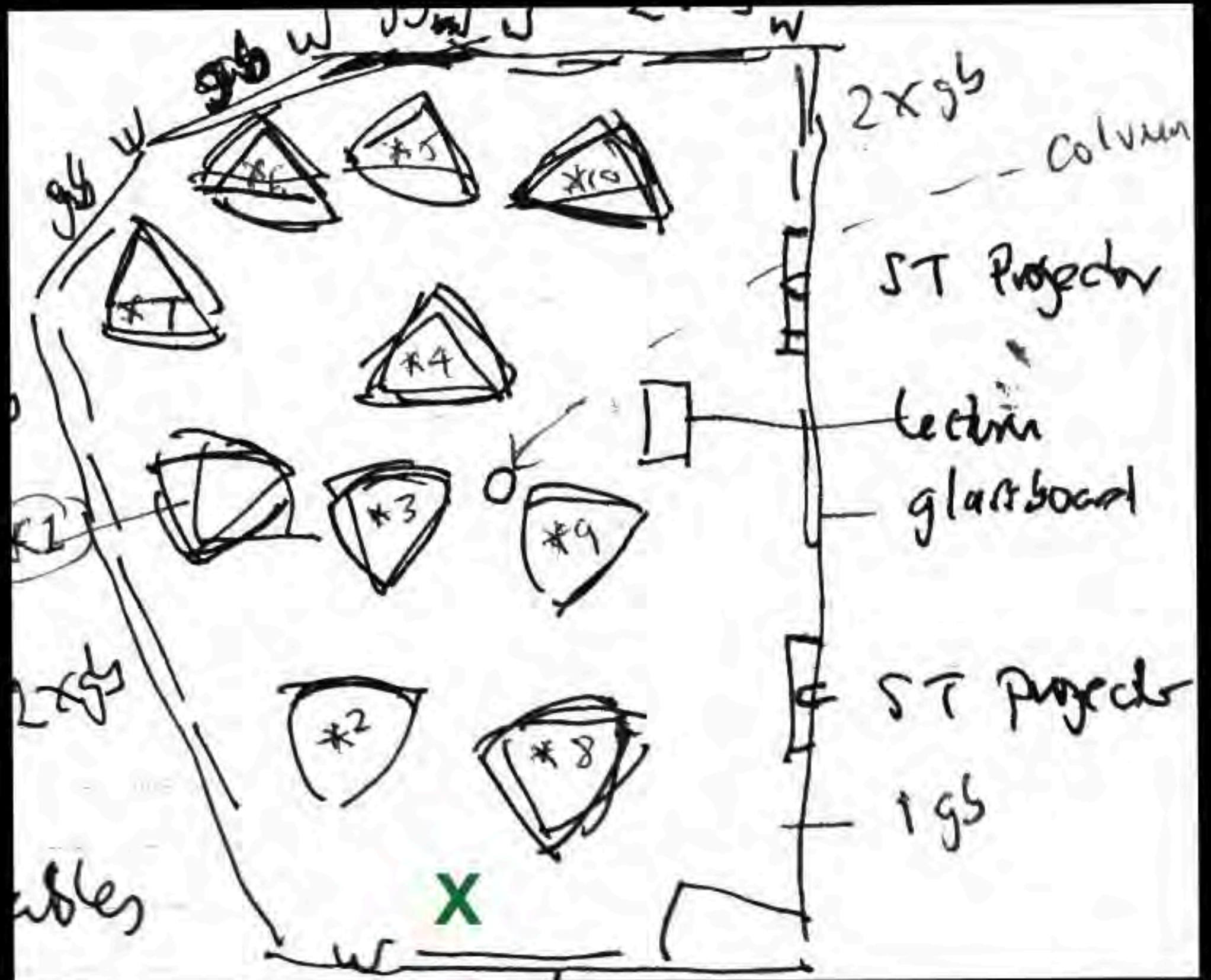
University of Loughborough

Buxton Campus, Derby



Derby, Buxton seminar

Sketch drawn during
observation from **X**



Buxton Campus, seminar





‘Plectrum’ table
2m equilateral curvilinear

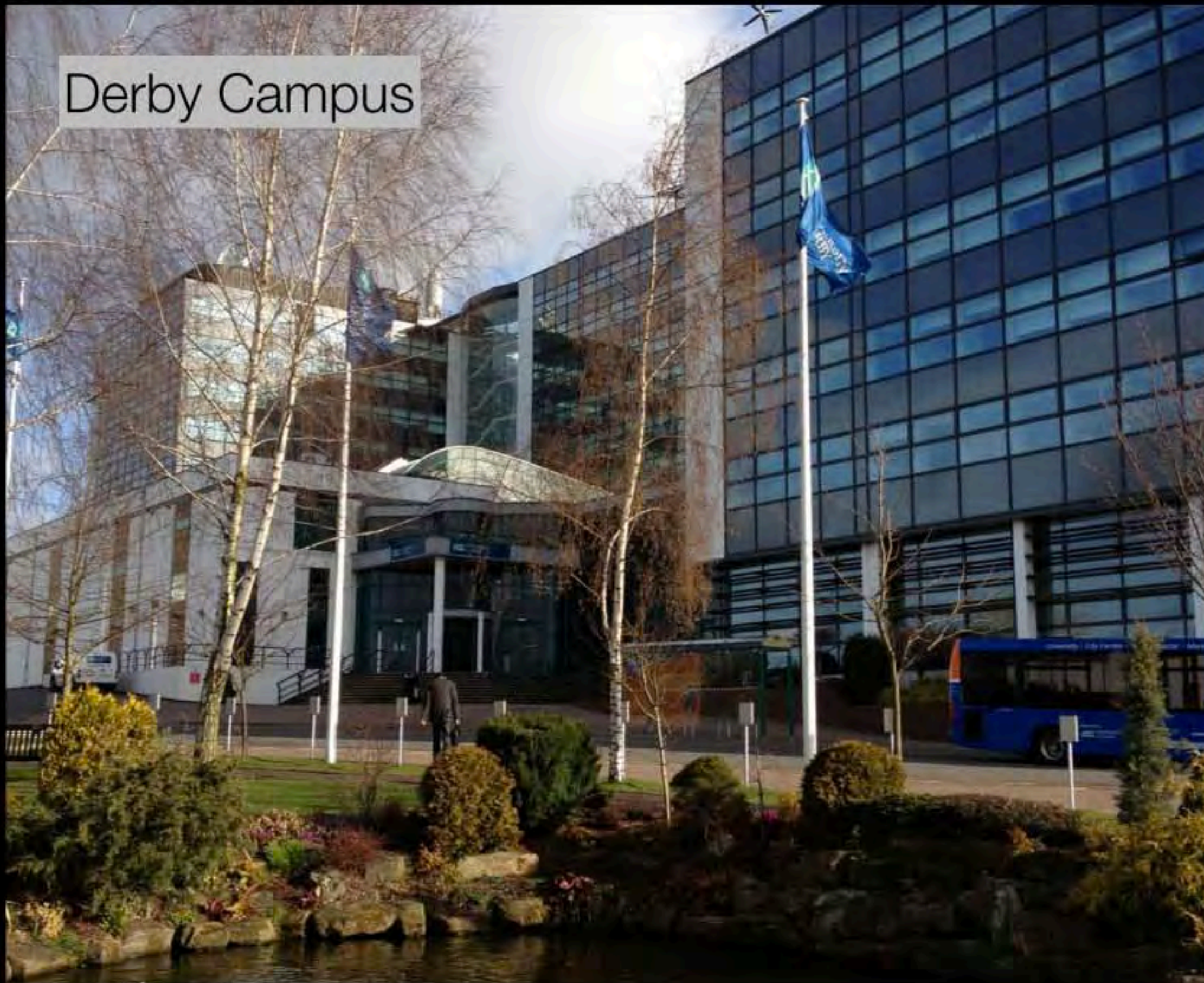
Buxton Campus, seminar 1



Buxton Campus, seminar 2

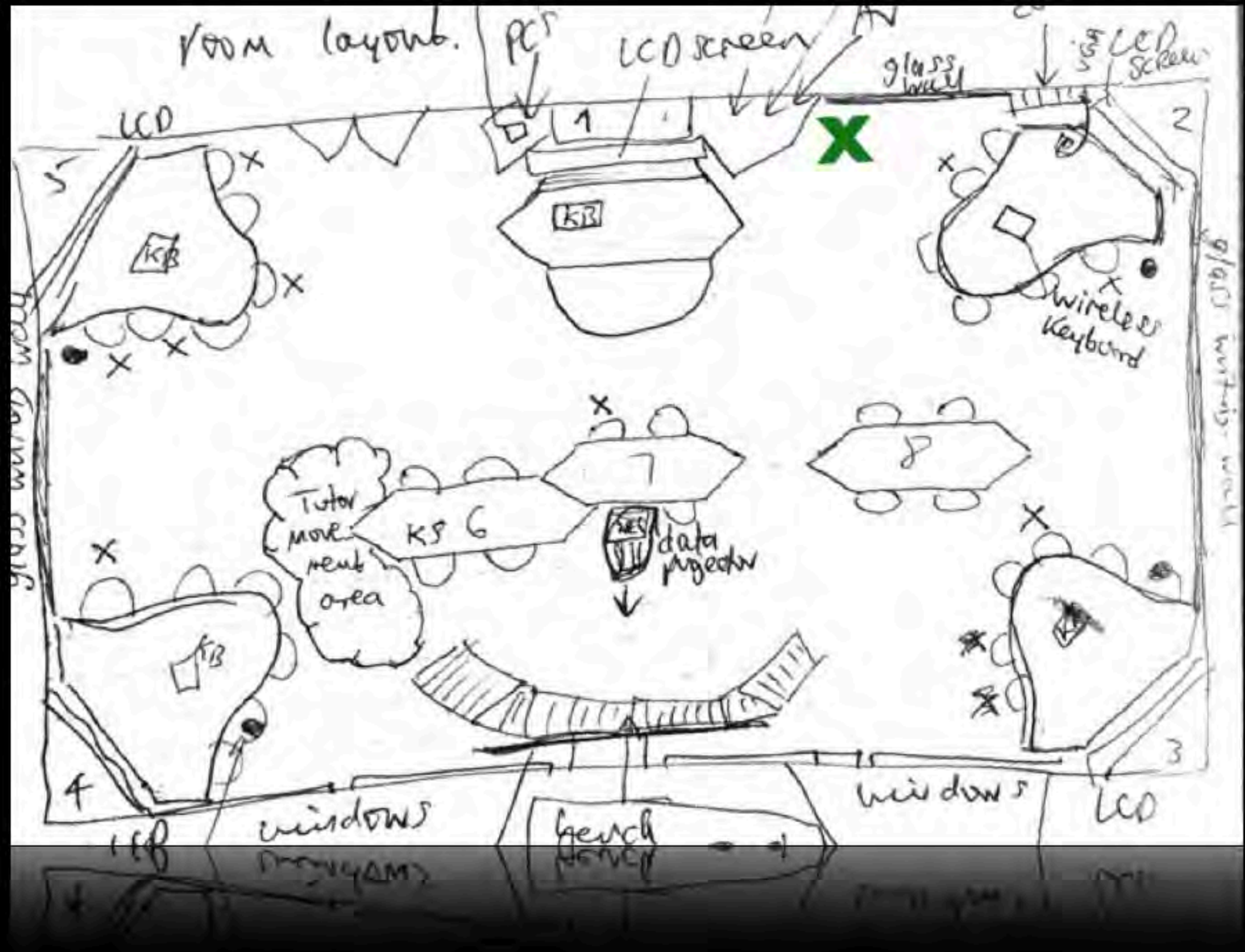


Derby Campus



Derby, Collaborative Space

Sketch drawn during
observation from **X**



Derby campus, seminar



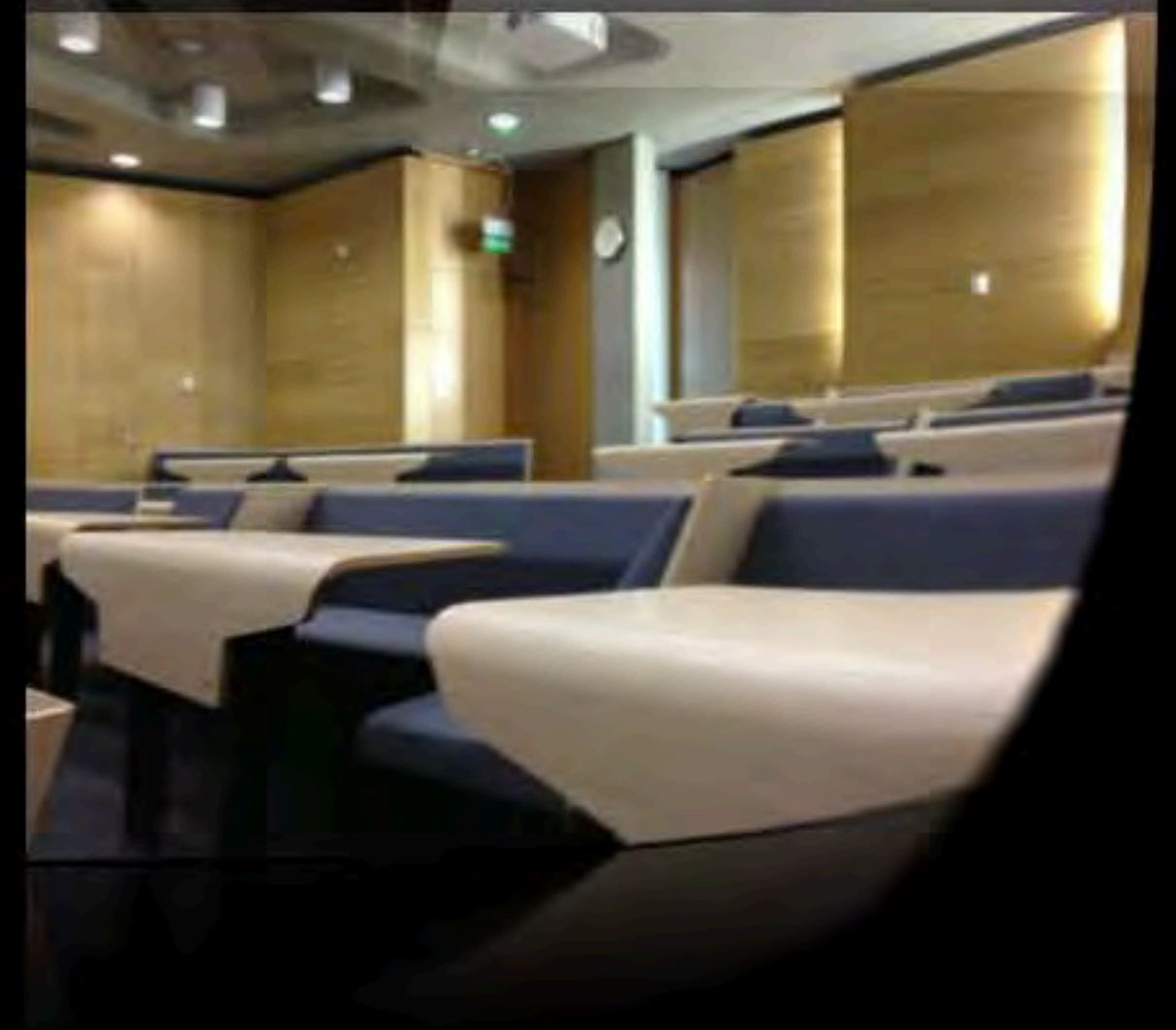


RECREATION

Many recreational activities are unaffected by age. These seem to be those that do not make many demands on perceptual co-motor co-ordination, attentional capacity, memory or speed of processing (gardening, cooking).

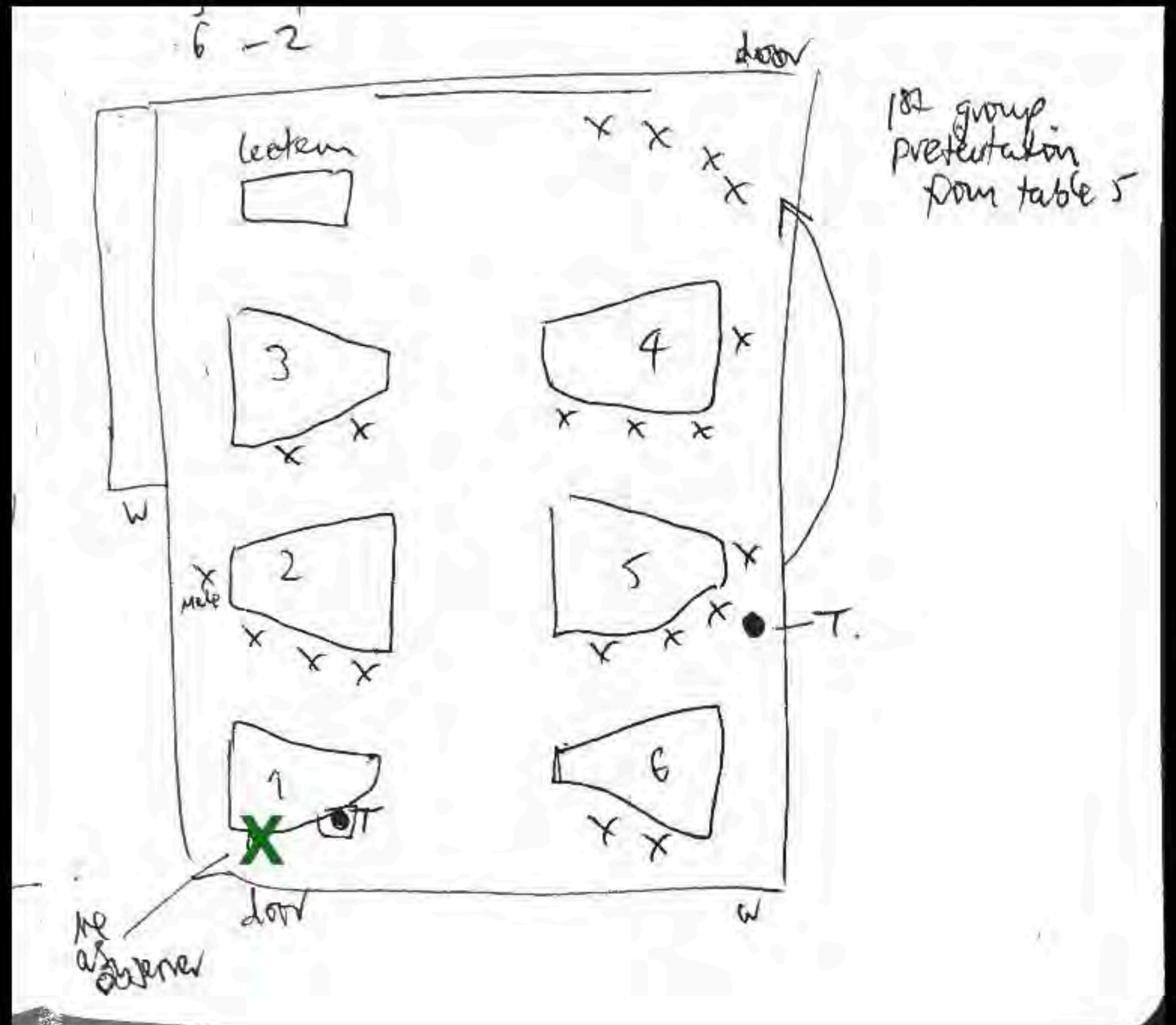
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Loughborough, Design School

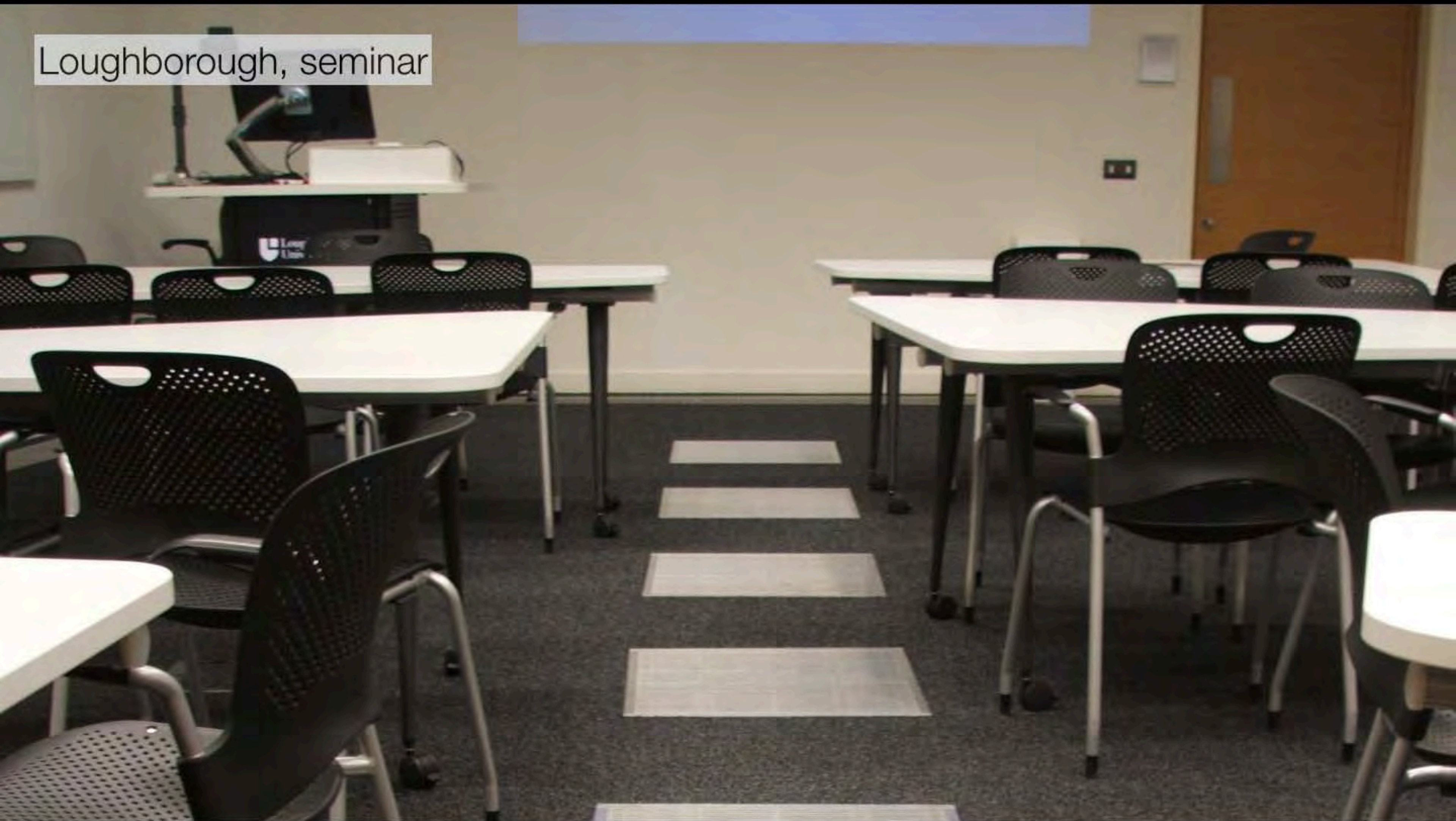


Loughborough, Seminar

Sketch drawn during
observation from **X**



Loughborough, seminar



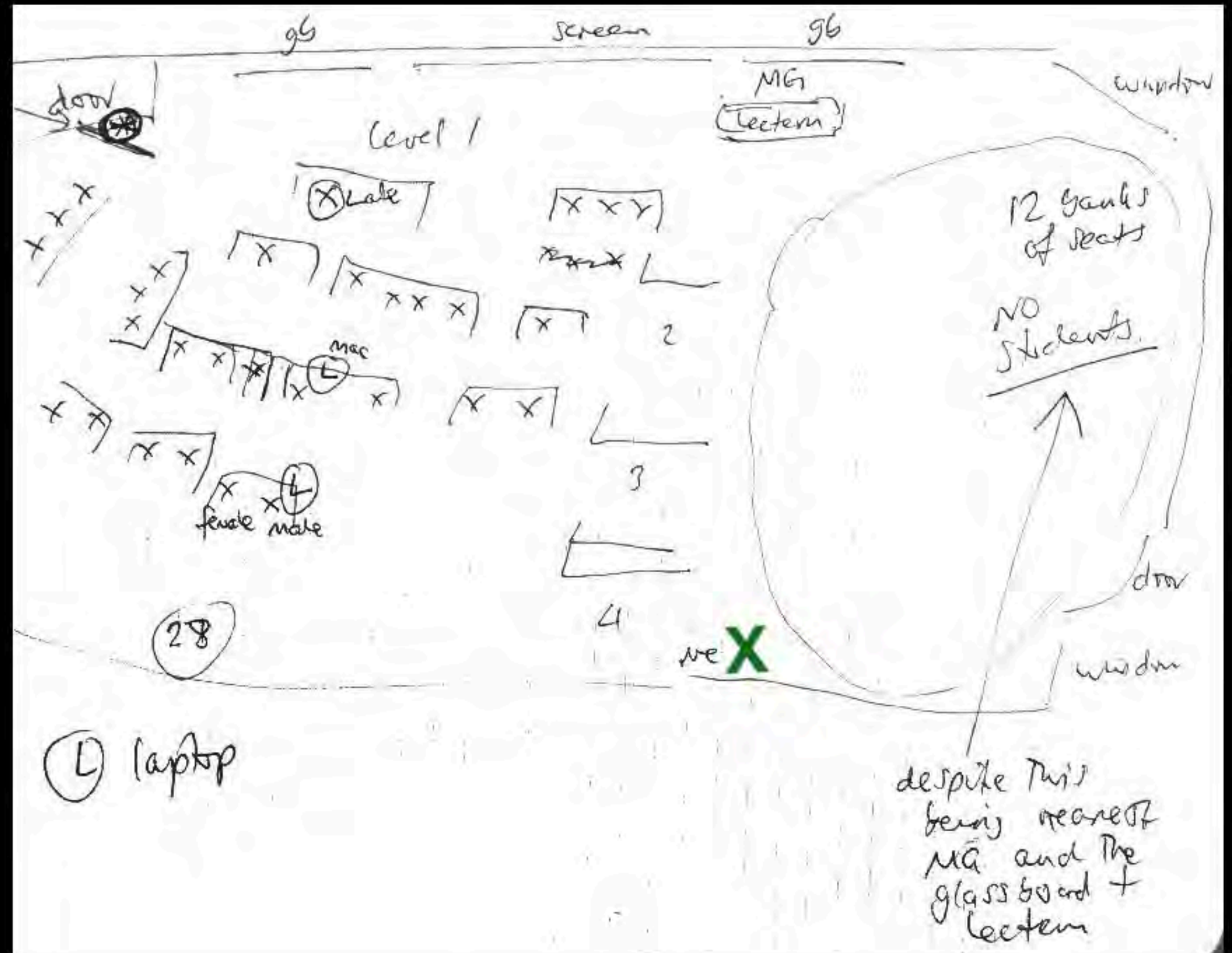


Triangular table
non-equilateral curvilinear



Loughborough, Lecture theatre

Sketch drawn during
observation from **X**



Loughborough, lecture theatre

FURTHER READING: Maughan RJ and
Watt PW (2010) The biochemical basis of
sports performance. Oxford University Press.
Chapters 3 - 6

See this video!!!

Hakan Westerblad - May 2012
"Physiology of muscle fatigue"

<http://www.youtube.com/watch?v=Ak9WHQHT04k>





Interview transcripts

It's a nice place to work in TP you get to sit around in a group of say five or six around the table and in that way it is generally more tutorial than a lecture, it'll happen is more naturally, other people say to me that it's really nice you make friends with people on your course, where they just go to a lecture and then walk out afterwards without speaking to anyone, sitting on a group table your bound to talk to other people and you're all facing each other as well on those triangular tables so you've got to talk to each other basically (laughs)

The chairs are comfortable yeah they're good I've never had an ache on them,

Interview transcripts

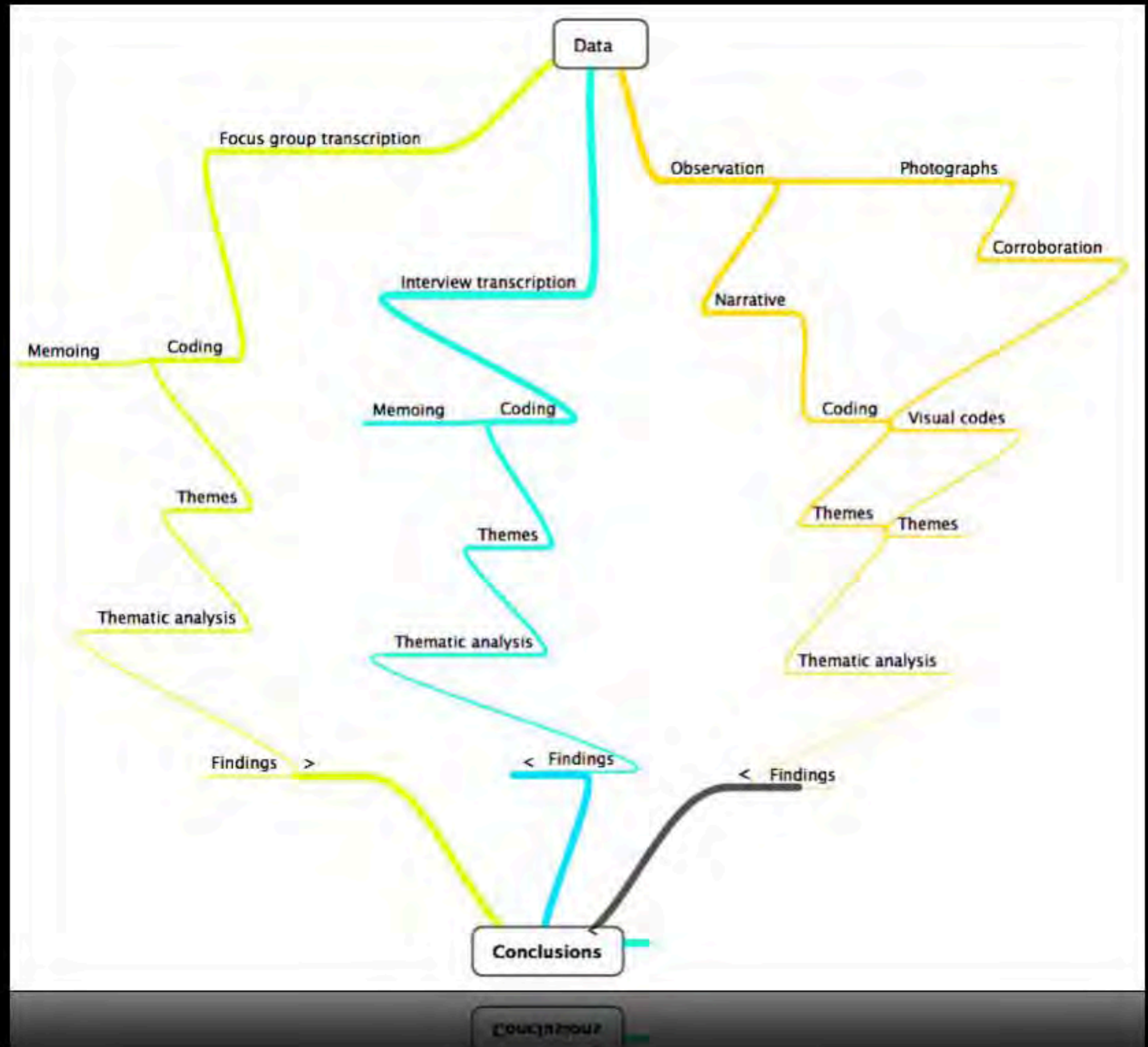
Quite modern, it's the only one of its kind

There's loads of rooms, there's two boards so yours see the presentation, you don't have to strain to look at the board.

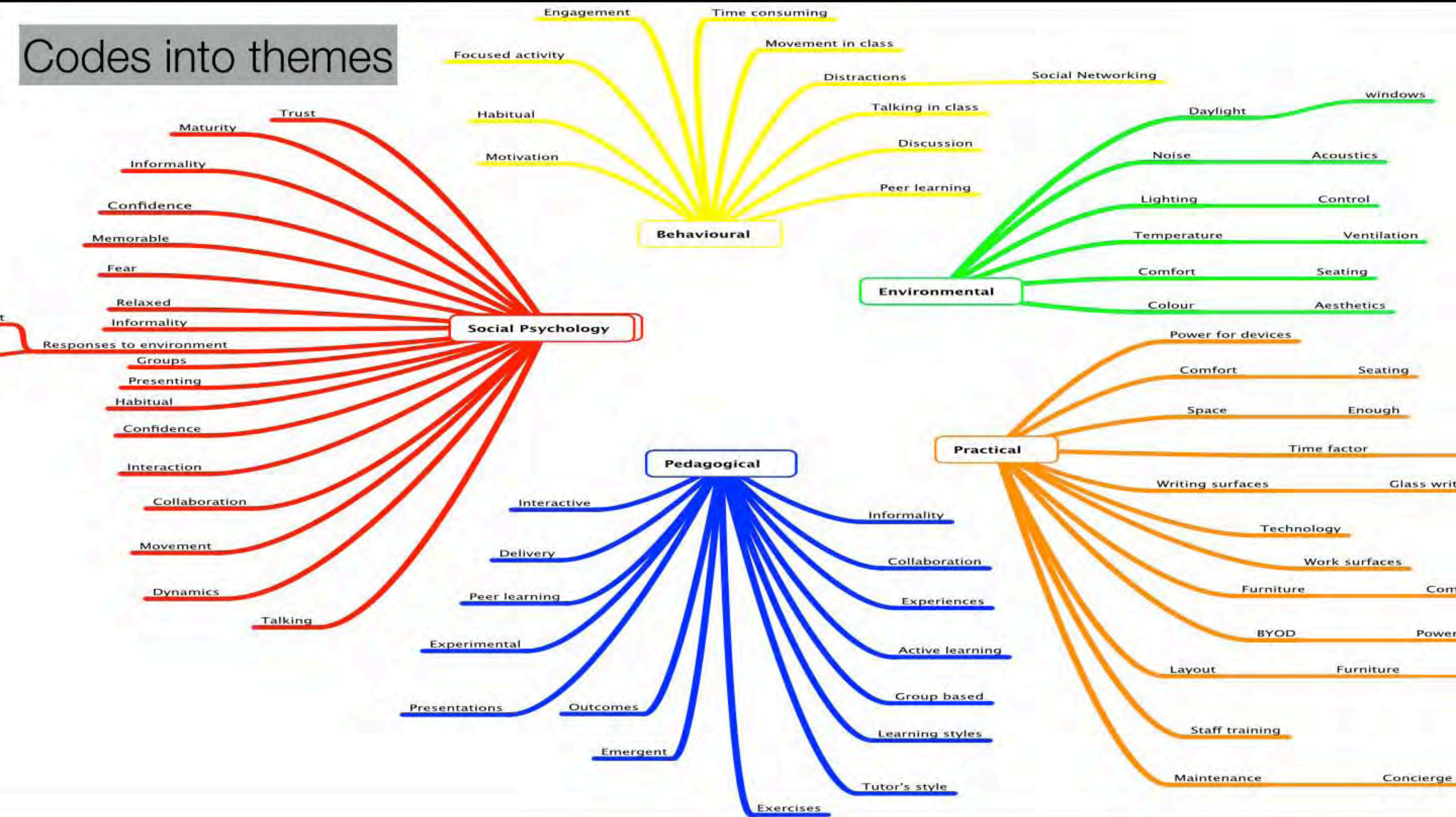
It's nice for the lecturer as he can go round easier, but there been a few times when I've been raising my hand, and or calling for someone but he can't really see where I'm calling from, so he gets confused or doesn't pay attention as he can't recognise where the voice is coming from.

Data analysis

Process of data capture through to coding, thematic analysis and then to findings



Codes into themes



Themes: for consideration and action

1. Behavioural
2. Environmental
3. Pedagogical
4. Practical
5. Social & psychological

Behavioural

- Supportive peer relationships
- Talking in class, + and -
- 'Social loafing' issue
- Movement easier
- Informality preferred
- Greater engagement



Environmental

- Daylight; connected, alertness
- Acoustics; less distraction
- Colour; modern, bright,
- Comfort; greater focus over time
- Temperature; more comfortable



Pedagogical - Academics

- Students engage more actively in exploratory learning
- Developing own emerging practice
- Positive impact on students' learning outcomes
- Adopted role of facilitator, see more risk taking by students



Pedagogical - Students

- Significant difference to students learning experience compared with other rooms
- Being relaxed helps with creative work
- Preference to be active and working in groups
- Forced to shift attention and not just focus on particular spot for whole lesson



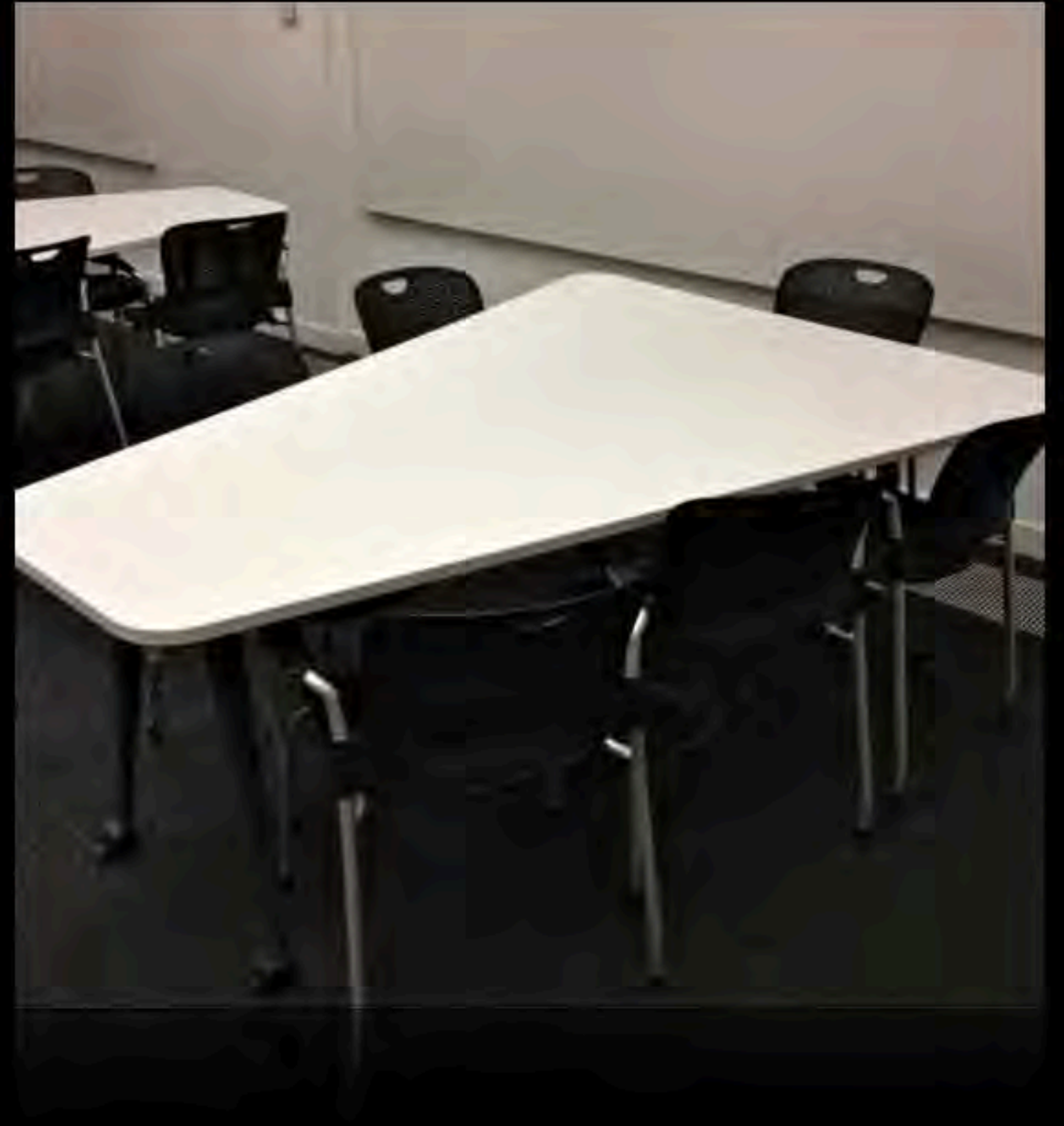
Practical

- Improved amount of space, overwhelming positive feature
- Academics favour layouts that use width of a room, important for sight lines
- Students dislike being 'crammed in' rows unable to move



Practical - contd.

- Rounded triangular tables must be equilateral, easier to follow presentations and to work in groups
- Comfort and practicality of chairs on castors, good for longer classes
- Impact of spaces of timetabling and facilities management



Practical - contd.

- Proximity and number of writing surfaces; extremely valuable technical resource
- Large LCD screens around the room that mirror projector output important in collaborative rooms
- Shared wireless technology; effective for collaboration and confidence boost for presentations



Psychological & Social

- Students' confidence seen to improve and feel less pressured in class
- Layout permitted groups to present from shared table, less of fear factor
- Student's developing confidence impacts on their approach to other classes



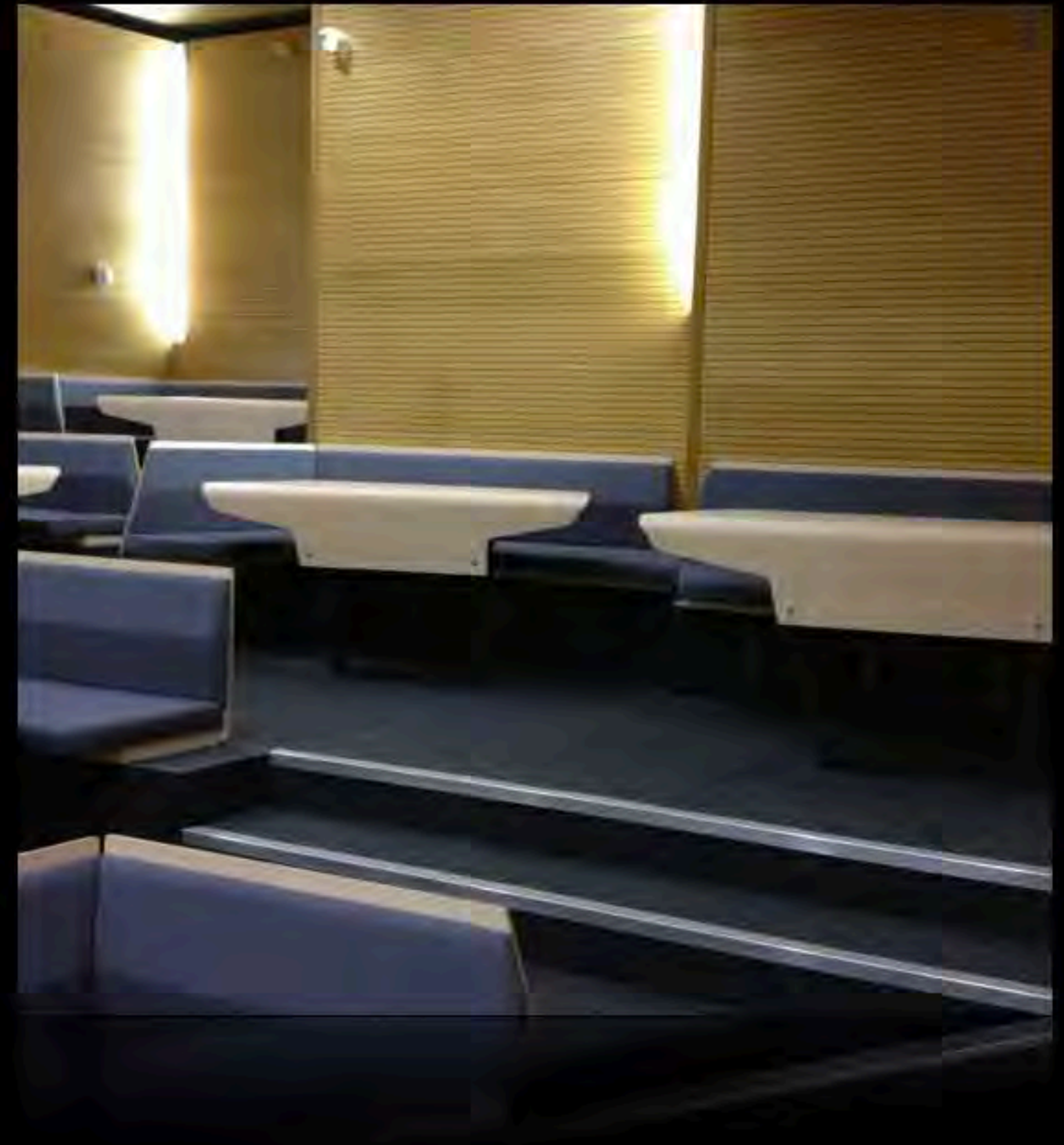
Psychological & Social - contd.

- Greater equality with tutors, less formal relationship
- There is more debate, discussion, even disagreement
- Positive change in students' relationships within cohort



Psychological & Social - contd.

- “Fantastic, “fabulous”, “innovative” rooms are memorable, viewed as favourite, positive and inspiring
- Students’ motivation in these new spaces leads to greater engagement
- Space for experimentation, but need to learn how to work in new spaces



Research Journal extract, Derby

'Before the start of the class, a student came in and we had a short conversation. She told me that she had dyslexia and that she finds the space so helpful, mainly due to the large glass writing surfaces. She feels she wouldn't have achieved the grades she has, especially as students are able to use the room whenever it's not timetabled.'

Quote from student, Loughborough

“When I say things I realise I might be wrong and she tells you how to amend it, but if you don't get the chance to present in your groups, you don't know if you're doing it wrong, so when it comes to your essays and you could get it all wrong”

Quote from academic, Loughborough

“The room caters for diversity of students, their backgrounds, you can manage their preferences for learning styles which is difficult to do in traditional lecture theatre, but more successful in the new room.”

Quote from student, Derby

“Psychologically the tutor gets to sit on your level, face-to-face where in a normal room they usually stand up and it makes you feel like under pressure...it makes a psychological connection with him being above us and you being a student. I think it makes a massive difference.”

Quote from academic, Loughborough

“I think the results are slightly better than results I have in previous years, I think it's because their critical skills have developed a little bit more, I haven't changed a lot in the way I teach the theory, but I think they are having discussions about work, on developing presentation and critical skills, I think that was facilitated by the type of room that we were using.”

Thank you